Air Force Research Laboratory|AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

AFRL TESTS ANTENNA RADAR DOME MATERIALS FOR NAVY

AFRL used its unique in-house capabilities to provide critical experimental validation for the US Navy Surface Warfare Center. This technology is of interest to all of the services, including the Air Force.

Air Force Research Laboratory
Wright-Patterson AFB OH

Accomplishment

AFRL engineers used the laboratory's Aerospace Structures Research Facility to evaluate numerous composite material samples for the Navy. The Navy may use these samples for the radar dome of its DD(X) ship concept. Engineers exposed the samples to high-energy pulses to determine their resistance to thermal threats. Raytheon, the contractor responsible for sample development, will use the experimental results to develop radar that is resistant to battle damage.

Background

The DD(X) is the Navy's next-generation destroyer. This multimission platform will conduct precision strike and fire support, dominate coastal regions, and respond to difficult threats. Survivability is a major DD(X) requirement, and a radar dome capable of protecting the ship's radar from thermal threats is vital to satisfying this requirement.

AFRL's Aerospace Structures Research Facility is the largest combined-environment experimental facility in the world. It provides state-of-the-art validation capabilities to all government agencies, as well as industry and academia through cooperative research and development agreements.

Air Vehicles
Support to the Warfighter

Additional Information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (05-VA-19)